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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	
Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems	**PR Docket No. 93-61** **RM No. 8013**

COMMENTS OF
LOCATION SERVICES

1. Location Services ("LS"), by its attorneys, hereby submits its Comments concerning the above-referenced Notice of Proposed Rulemaking, 8 FCC Rcd. 2502 (1993). The Federal Communications Commission ("FCC" or "the Commission") invited Comments on the Notice of Proposed Rulemaking ("NPRM") to be filed by June 29, 1993.

2. LS holds licenses in the name of Roger D. Linquist d/b/a Location Services for Automatic Vehicle Monitoring ("AVM") systems in California; Michigan; Texas; New York; Pennsylvania; Massachusetts; Washington, D.C. and vicinity; Florida; and Illinois.

3. LS is pleased that the Commission is moving forward in amending its Rules to promote the operation and growth of automatic vehicle monitoring systems and, with the exception of certain items discussed below, LS generally supports the Commission's proposals.

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Background

4. The petitioners, North American Teletrac and Location Technologies, Inc., requested that the Commission replace the interim rules for LMS[1/] systems with permanent rules and it listed five major inadequacies of the interim rules.

a. The interim rules do not take into account modern technical capabilities of LMS equipment and do not reflect the range of services it can provide.

b. Absent rules designed to minimize interference between co-channel wideband pulse-ranging LMS systems, it is likely that harmful interference will occur as systems proliferate.

c. The interim rules do not provide for a standardized frequency for a forward link. Absent a standardized frequency for the forward link, however, interference could result that will degrade system performance.

d. The interim rules only provide for location of vehicles. However, technology has advanced far beyond vehicle location as its only use. Thus, the interim rules hinder innovation.

e. The interim rules, simply because they are interim, discourage large scale investment in deployment of LMS technology.

LS addresses each of these points below.

1/ The Commission, in the referenced NPRM, proposed to rename the AVM service to Location and Monitoring Service ("LMS"). Accordingly, this service will be referred to as LMS henceforth in these Comments.

Technical Specification and
Equipment Authorization Procedures

5. Type acceptance required for LMS systems should be required once new systems have stabilized their design. However, because new systems will likely employ new technology, a temporary waiver on the type acceptance process for new system design substantially assists competitive systems to be commercially introduced on a timely basis rather than be delayed due to the cost and time associated with a type acceptance process. (Unlike cellular telephone or paging services, LMS service currently involves proprietary equipment designs.) Engineering changes are inevitable as new technology is introduced to commercial operations and such equipment may substantially delay market entry of new competitors if such modifications require type acceptance cycle in the early stages. Therefore, a minimum 18 month temporary authorization following commercial introduction would provide important flexibility to new LMS system operators before type acceptance is required. This is the only way that new technology can be introduced to the evolving needs of the market. In the interim period, protection would be afforded other operators in and out of band by requiring equipment to meet the FCC masking rules for the LMS frequency band, or §90.239(e)(2)(iii).

Co-channel Interference

6. **Wideband.** LS agrees that co-channel interference should be avoided if LMS systems are to realize practical cost/performance constraints and technical system performance objectives. Furthermore, the 8 MHz wideband proposal would provide an opportunity to minimize cost of

currently occupied by wide-band LMS systems. We would also agree with licensing LMS systems in the 902-928 MHz band, with the narrow-band systems licensed in the bands 902-904, 912-18 MHz and 926-928 MHz, and the wideband systems licensed in the bands 904-912 and 918-926 MHz. This licensing scheme will be very important to manage what might be an unacceptable co-channel interference problem for the upperband licensee(s). Further, LS supports the Commission's proposal that the narrow-band systems relicense their systems to operate on other spectrum within three years from the effective date of the Report and Order in this proceeding.

Standardized Frequency Assignment for the Forward Link

8. Teletrac's proposal calls for 250 kHz for the forward link LMS transmission to be located in each other's wideband return link (i.e., forward link for 904-912 band is located at 924.890-925.140 MHz and 904.375-904.625 MHz for the 918-926 MHz band). This poses a problem of the upperband licensee(s) not being able to use the 840 kHz at the band edge for wideband signalling, setting aside 1.1 MHz. This can be easily addressed by placing the forward link at the band edge in the upper band, that is, at 925.750-926.000 MHz. Thus, the upper band operator effectively sacrifices only 250 kHz of the wideband rather than 1.110 MHz of the 8 MHz band. Similarly, the lowerband

operator should have the same opportunity to set the forward link at 904.000-904.250 MHz (see Table 1).

TABLE 1

WideBand

	Return Link	Forward Link
Lower LMS Band	904-912 MHz	925.750-926.000 MHz
Upper LMS Band	918-926 MHz	904.000-904.250 MHz

Broaden Rules to Monitor All Animate and Inanimate Objects

9. All forms of location services should be permitted under LMS operations. Whereas vehicle dispatching functions and stolen car protection services normally require permanent or fixed vehicle installation, many other applications require that the unit be portable and suitable for carrying on a person. Other uses could include personal security services ("panic-button" and subsequent location determination), locating wandering elderly people, locating field sales or service personnel and many other applications, including public safety and law enforcement. Also non-vehicular "object" location determination can be also addressed to cover important shipments of capital equipment or other valuable merchandise.

Interim Rules Discourage Large Scale Investment

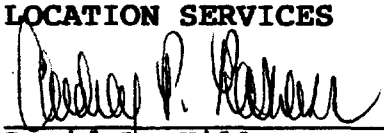
10. Permanent rules will remove the current risk of investment and operation that exist under the interim

rules. Due to the significant investment and expense of starting subsequent operations in a new industry, permanent rules would permit companies to focus on the market and technology risks of the LMS business and not on the licensing risks. In this regard, it is also important to broaden the base of potential service offerings to animate and inanimate objects to attract significant capital and competition to continue evolving radiolocation technology that will benefit LMS services in general.

11. The Commission is requested to take these comments into consideration in adopting final Rules in this proceeding.

Respectfully submitted,

LOCATION SERVICES

By: 

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Dated: June 29, 1993

CERTIFICATE OF SERVICE

I, Gladys L. Nichols, do hereby certify that on this 29th day of June, 1993, the foregoing **COMMENTS OF LOCATION SERVICES** was served to the following persons by First Class Mail:

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